WASHINGTON STATE DEPARTMENT OF ECOLOGY

Dangerous Waste Permit Application Part A Form

Date Received	Reviewed by:	Date:
Month Day Year	Approved by:	Date:

I. This form is submitted to: (place an "X" in the appropriate box)

☒	Request modification to a final status permit (commonly called a "Part B" permit)
☐	Request a change under interim status
☐	Apply for a final status permit. This includes the application for the initial final status permit for a site or for a permit renewal (i.e., a new permit to replace an expiring permit).
☐	Establish interim status because of the wastes newly regulated on: (Date)
	List waste codes:

II. EPA/State ID Number

W A 7 8 9 0 0 0 8 9 6 7

III. Name of Facility

US Department of Energy – Hanford Facility

IV. Facility Location (Physical address not P.O. Box or Route Number)

A. Street

825 Jadwin

City or Town	State	ZIP Code
Richland	WA	99352

County Code (if known)	County Name
0 0 5	Benton

B. Land Type	C. Geographic Location Latitude (degrees, mins, secs)	Longitude (degrees, mins, secs)	D. Facility Existence Date Month Day Year
F	Refer to TOPO Map (Section XV.)		03 22 1943

V. Facility Mailing Address

Street or P.O. Box

P.O. Box 550

City or Town	State	ZIP Code
Richland	WA	99352

VI. Facility contact (Person to be contacted regarding waste activities at facility)		
Name (last)	**(first)**	
Shoop	Doug	
Job Title	**Phone Number (area code and number)**	
Acting Manager	(509) 376-7395	
Contact Address		
Street or P.O. Box		
P.O. Box 550		
City or Town	**State**	**ZIP Code**
Richland	WA	99352

VII. Facility Operator Information		
A. Name	**Phone Number (area code and number)**	
Department of Energy Owner/Operator Pacific Northwest National Laboratory Co-Operator for 325 HWTUs*	(509) 376-7395 (509) 372-6503	
Street or P.O. Box		
P.O. Box 550 P.O. Box 999		
City or Town	**State**	**ZIP Code**
Richland	WA	99352
B. Operator Type F		
C. Does the name in VII.A reflect a proposed change in operator? ☐ Yes ☒ No **If yes, provide the scheduled date for the change:** Month / Day / Year		
D. Is the name listed in VII.A. also the owner? If yes, skip to Section VIII.C. ☐ Yes ☒ No		

VIII. Facility Owner Information		
A. Name	**Phone Number (area code and number)**	
Doug S. Shoop, Operator/Facility-Property Owner	(509) 376-7395	
Street or P.O. Box		
P.O. Box 550		
City or Town	**State**	**ZIP Code**
Richland	WA	99352
B. Operator Type F		
C. Does the name in VII.A reflect a proposed change in operator? ☐ Yes ☒ No **If yes, provide the scheduled date for the change:** Month / Day / Year		

IX. NAICS Codes (5/6 digit codes)	
A. First	**B. Second**
541712 Research & Development in the Physical, Engineering, & Life Sciences	
C. Third	**D. Fourth**

X. Other Environmental Permits (see instructions)

A. Permit Type	B. Permit Number	C. Description
E	AIR-11-7040	WAC 246-247, Non radioactive Air, 40 CFR 61, Subpart H, NESHAPS

XI. Nature of Business (provide a brief description that includes both dangerous waste and non-dangerous waste areas and activities)

The 325 Hazardous Waste Treatment Units (325 HWTUs) consist of the Shielded Analytical Laboratory (SAL), which includes Rooms 32, 200, 201, 202, and 203 of the 325 Building; the Hazardous Waste Treatment Unit (HWTU), encompassing Rooms 520, 524, and 528 of the 325 Building; the Cask Handling Area, consisting of the northern portion of Rooms 603 and 604A of the 325 Building; the Truck Lock, Room 610 of the 325 Building; and the 3714 Pad area, an outdoor storage area adjacent to the 325 Building. The 325 HWTUs began waste management operations in 1991 (SAL) and 1995 (HWTU); the Cask Handling Area, the Truck Lock, and the 3714 Pad were added in 2014.

Dangerous or mixed waste treatments in the SAL and HWTU are generally conducted as small bench-scale operations except for in-tank treatments. Treatment processes utilized at the 325 HWTUs may include any of the types of treatment described in WAC 173-303-380(2)(d), Table 2, Section 2 except for the following: incineration technologies (T06-T10), large-scale biological treatment (T68, T72, and T73), boiler and industrial furnace-based treatment (T80-T93), and treatment in containment buildings (T94).

Routine dangerous and/or mixed waste treatment that will be conducted in the SAL and HWTU will include pH adjustment, ion exchange, carbon absorption, oxidation, reduction, waste concentration by evaporation, precipitation, filtration, solvent extraction, solids washing, phase separation, catalytic destruction, and solidification/stabilization. These waste treatments will be conducted on small quantities of diverse radioactive, dangerous, and/or mixed wastes generated from ongoing research and development and analytical chemistry activities.

Activities in the Cask Handling Area, the Truck Lock, and the 3714 Pad are focused on preparation and staging of dangerous or mixed waste for shipment to treatment or disposal facilities. Activities include repackaging, stabilization and void filling, and staging and storage for shipment. This activity often involves placing containers in 4'x4'x8' burial boxes and filling void spaces with concrete. The use of burial boxes is the reason these units require significantly larger treatment and storage capabilities; the actual amount of waste generated is not the reason for the larger capacity shown. The Cask Handling Area also contains a hood where small-scale treatment like that performed in the HWTU and SAL units can occur.

EXAMPLE FOR COMPLETING ITEMS XII and XIII (shown in lines numbered X-1, X-2, and X-3 below): A facility has two storage tanks that hold 1200 gallons and 400 gallons respectively. There is also treatment in tanks at 20 gallons/hr. Finally, a one-quarter acre area that is two meters deep will undergo *in situ vitrification.*

Section XII. Process Codes and Design Capacities								Section XIII. Other Process Codes								
Line Number		A. Process Codes (enter code)			B. Process Design Capacity		C. Process Total Number of Units	Line Number		A. Process Codes (enter code)			B Process Design Capacity		C. Process Total Number of Units	D. Process Description
					1. Amount	2. Unit of Measure (enter code)							1. Amount	2. Unit of Measure (enter code)		
X	1	S	0	2	1,600	G	002	X	1	T	0	4	700	C	001	In situ vitrification
X	2	T	0	3	20	E	001									
X	3	T	0	4	700	C	001									
	1	S	0	1	50,360	L	005		1							
	2	S	0	2	1,218	L	001		2	T	0	4	39,874	V	005	Treatment in containers
	3	T	0	1	1,218	V	001		3							
	4								4							
	5								5							
	6								6							
	7								7							
	8								8							
	9								9							
1	0							1	0							
1	1							1	1							
1	2							1	2							
1	3							1	3							
1	4							1	4							
1	5							1	5							
1	6							1	6							
1	7							1	7							
1	8							1	8							
1	9							1	9							
2	0							2	0							
2	1							2	1							
2	2							2	2							
2	3							2	3							
2	4							2	4							
2	5							2	5							

XIV. Description of Dangerous Wastes

Example for completing this section: A facility will receive three non-listed wastes, then store and treat them on-site. Two wastes are corrosive only, with the facility receiving and storing the wastes in containers. There will be about 200 pounds per year of each of these two wastes, which will be neutralized in a tank. The other waste is corrosive and ignitable and will be neutralized then blended into hazardous waste fuel. There will be about 100 pounds per year of that waste, which will be received in bulk and put into tanks.

Line Number	A. Dangerous Waste No.	B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Processes (1) Process Codes	D. Processes (2) Process Description [If a code is not entered in D (1)]
X 1	D 0 0 2	400	P	S 0 1 T 0 1	
X 2	D 0 0 1	100	P	S 0 2 T 0 1	
X 3	D 0 0 2				Included with above
1	D 0 0 1	146,500 [92,000 (S01); 54,500 (T04)]	K	S 0 1 T 0 4	Includes Debris
2	D 0 0 2		K	S 0 1 T 0 4	Includes Debris
3	D 0 0 3		K	S 0 1 T 0 4	Includes Debris
4	D 0 0 4		K	S 0 1 T 0 4	Includes Debris
5	D 0 0 5		K	S 0 1 T 0 4	Includes Debris
6	D 0 0 6		K	S 0 1 T 0 4	Includes Debris
7	D 0 0 7		K	S 0 1 T 0 4	Includes Debris
8	D 0 0 8		K	S 0 1 T 0 4	Includes Debris
9	D 0 0 9		K	S 0 1 T 0 4	Includes Debris
10	D 0 1 0		K	S 0 1 T 0 4	Includes Debris
11	D 0 1 1		K	S 0 1 T 0 4	Includes Debris
12	D 0 1 2		K	S 0 1 T 0 4	Includes Debris
13	D 0 1 3		K	S 0 1 T 0 4	Includes Debris
14	D 0 1 4		K	S 0 1 T 0 4	Includes Debris
15	D 0 1 5		K	S 0 1 T 0 4	Includes Debris
16	D 0 1 6		K	S 0 1 T 0 4	Includes Debris
17	D 0 1 7		K	S 0 1 T 0 4	Includes Debris
18	D 0 1 8		K	S 0 1 T 0 4	Includes Debris
19	D 0 1 9		K	S 0 1 T 0 4	Includes Debris
20	D 0 2 0		K	S 0 1 T 0 4	Includes Debris
21	D 0 2 1		K	S 0 1 T 0 4	Includes Debris
22	D 0 2 2		K	S 0 1 T 0 4	Includes Debris
23	D 0 2 3		K	S 0 1 T 0 4	Includes Debris
24	D 0 2 4		K	S 0 1 T 0 4	Includes Debris
25	D 0 2 5		K	S 0 1 T 0 4	Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

Line Number	A. Dangerous Waste No.	B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Process (1) Process Codes	(2) Process Description [If a code is not entered in D (1)]
26	D 0 2 6		K	S 0 1 T 0 4	Includes Debris
27	D 0 2 7		K	S 0 1 T 0 4	Includes Debris
28	D 0 2 8		K	S 0 1 T 0 4	Includes Debris
29	D 0 2 9		K	S 0 1 T 0 4	Includes Debris
30	D 0 3 0		K	S 0 1 T 0 4	Includes Debris
31	D 0 3 1		K	S 0 1 T 0 4	Includes Debris
32	D 0 3 2		K	S 0 1 T 0 4	Includes Debris
33	D 0 3 3		K	S 0 1 T 0 4	Includes Debris
34	D 0 3 4		K	S 0 1 T 0 4	Includes Debris
35	D 0 3 5		K	S 0 1 T 0 4	Includes Debris
36	D 0 3 6		K	S 0 1 T 0 4	Includes Debris
37	D 0 3 7		K	S 0 1 T 0 4	Includes Debris
38	D 0 3 8		K	S 0 1 T 0 4	Includes Debris
39	D 0 3 9		K	S 0 1 T 0 4	Includes Debris
40	D 0 4 0		K	S 0 1 T 0 4	Includes Debris
41	D 0 4 1		K	S 0 1 T 0 4	Includes Debris
42	D 0 4 2		K	S 0 1 T 0 4	Includes Debris
43	D 0 4 3		K	S 0 1 T 0 4	Includes Debris
44	F 0 0 1		K	S 0 1 T 0 4	Includes Debris
45	F 0 0 2		K	S 0 1 T 0 4	Includes Debris
46	F 0 0 3		K	S 0 1 T 0 4	Includes Debris
47	F 0 0 4		K	S 0 1 T 0 4	Includes Debris
48	F 0 0 5		K	S 0 1 T 0 4	Includes Debris
49	F 0 2 7		K	S 0 1 T 0 4	Includes Debris
50	F 0 3 9		K	S 0 1 T 0 4	Includes Debris
51	P 0 0 1		K	S 0 1 T 0 4	Includes Debris
52	P 0 0 2		K	S 0 1 T 0 4	Includes Debris
53	P 0 0 3		K	S 0 1 T 0 4	Includes Debris
54	P 0 0 4		K	S 0 1 T 0 4	Includes Debris
55	P 0 0 5		K	S 0 1 T 0 4	Includes Debris
56	P 0 0 6		K	S 0 1 T 0 4	Includes Debris
57	P 0 0 7		K	S 0 1 T 0 4	Includes Debris
58	P 0 0 8		K	S 0 1 T 0 4	Includes Debris
59	P 0 0 9		K	S 0 1 T 0 4	Includes Debris
60	P 0 1 0		K	S 0 1 T 0 4	Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

61	P	0	1	1		K	S	0	1	T	0	4				Includes Debris
62	P	0	1	2		K	S	0	1	T	0	4				Includes Debris
63	P	0	1	3		K	S	0	1	T	0	4				Includes Debris
64	P	0	1	4		K	S	0	1	T	0	4				Includes Debris
65	P	0	1	5		K	S	0	1	T	0	4				Includes Debris
66	P	0	1	6		K	S	0	1	T	0	4				Includes Debris
67	P	0	1	7		K	S	0	1	T	0	4				Includes Debris
68	P	0	1	8		K	S	0	1	T	0	4				Includes Debris
69	P	0	2	0		K	S	0	1	T	0	4				Includes Debris
70	P	0	2	1		K	S	0	1	T	0	4				Includes Debris
71	P	0	2	2		K	S	0	1	T	0	4				Includes Debris
72	P	0	2	3		K	S	0	1	T	0	4				Includes Debris
73	P	0	2	4		K	S	0	1	T	0	4				Includes Debris
74	P	0	2	6		K	S	0	1	T	0	4				Includes Debris
75	P	0	2	7		K	S	0	1	T	0	4				Includes Debris
76	P	0	2	8		K	S	0	1	T	0	4				Includes Debris
77	P	0	2	9		K	S	0	1	T	0	4				Includes Debris
78	P	0	3	0		K	S	0	1	T	0	4				Includes Debris
79	P	0	3	1		K	S	0	1	T	0	4				Includes Debris
80	P	0	3	3		K	S	0	1	T	0	4				Includes Debris
81	P	0	3	4		K	S	0	1	T	0	4				Includes Debris
82	P	0	3	6		K	S	0	1	T	0	4				Includes Debris
83	P	0	3	7		K	S	0	1	T	0	4				Includes Debris
84	P	0	3	8		K	S	0	1	T	0	4				Includes Debris
85	P	0	3	9		K	S	0	1	T	0	4				Includes Debris
86	P	0	4	0		K	S	0	1	T	0	4				Includes Debris
87	P	0	4	1		K	S	0	1	T	0	4				Includes Debris
88	P	0	4	2		K	S	0	1	T	0	4				Includes Debris
89	P	0	4	3		K	S	0	1	T	0	4				Includes Debris
90	P	0	4	4		K	S	0	1	T	0	4				Includes Debris
91	P	0	4	5		K	S	0	1	T	0	4				Includes Debris
92	P	0	4	6		K	S	0	1	T	0	4				Includes Debris
93	P	0	4	7		K	S	0	1	T	0	4				Includes Debris
94	P	0	4	8		K	S	0	1	T	0	4				Includes Debris
95	P	0	4	9		K	S	0	1	T	0	4				Includes Debris
96	P	0	5	0		K	S	0	1	T	0	4				Includes Debris
97	P	0	5	1		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

98	P	0	5	4		K	S	0	1	T	0	4				Includes Debris
99	P	0	5	6		K	S	0	1	T	0	4				Includes Debris
100	P	0	5	7		K	S	0	1	T	0	4				Includes Debris
101	P	0	5	8		K	S	0	1	T	0	4				Includes Debris
102	P	0	5	9		K	S	0	1	T	0	4				Includes Debris
103	P	0	6	0		K	S	0	1	T	0	4				Includes Debris
104	P	0	6	2		K	S	0	1	T	0	4				Includes Debris
105	P	0	6	3		K	S	0	1	T	0	4				Includes Debris
106	P	0	6	4		K	S	0	1	T	0	4				Includes Debris
107	P	0	6	5		K	S	0	1	T	0	4				Includes Debris
108	P	0	6	6		K	S	0	1	T	0	4				Includes Debris
109	P	0	6	7		K	S	0	1	T	0	4				Includes Debris
110	P	0	6	8		K	S	0	1	T	0	4				Includes Debris
111	P	0	6	9		K	S	0	1	T	0	4				Includes Debris
112	P	0	7	0		K	S	0	1	T	0	4				Includes Debris
113	P	0	7	1		K	S	0	1	T	0	4				Includes Debris
114	P	0	7	2		K	S	0	1	T	0	4				Includes Debris
115	P	0	7	3		K	S	0	1	T	0	4				Includes Debris
116	P	0	7	4		K	S	0	1	T	0	4				Includes Debris
117	P	0	7	5		K	S	0	1	T	0	4				Includes Debris
118	P	0	7	6		K	S	0	1	T	0	4				Includes Debris
119	P	0	7	7		K	S	0	1	T	0	4				Includes Debris
120	P	0	7	8		K	S	0	1	T	0	4				Includes Debris
121	P	0	8	1		K	S	0	1	T	0	4				Includes Debris
122	P	0	8	2		K	S	0	1	T	0	4				Includes Debris
123	P	0	8	4		K	S	0	1	T	0	4				Includes Debris
124	P	0	8	5		K	S	0	1	T	0	4				Includes Debris
125	P	0	8	7		K	S	0	1	T	0	4				Includes Debris
126	P	0	8	8		K	S	0	1	T	0	4				Includes Debris
127	P	0	8	9		K	S	0	1	T	0	4				Includes Debris
128	P	0	9	2		K	S	0	1	T	0	4				Includes Debris
129	P	0	9	3		K	S	0	1	T	0	4				Includes Debris
130	P	0	9	4		K	S	0	1	T	0	4				Includes Debris
131	P	0	9	5		K	S	0	1	T	0	4				Includes Debris
132	P	0	9	6		K	S	0	1	T	0	4				Includes Debris
133	P	0	9	7		K	S	0	1	T	0	4				Includes Debris
134	P	0	9	8		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

135	P	0	9	9		K	S	0	1	T	0	4				Includes Debris
136	P	1	0	1		K	S	0	1	T	0	4				Includes Debris
137	P	1	0	2		K	S	0	1	T	0	4				Includes Debris
138	P	1	0	3		K	S	0	1	T	0	4				Includes Debris
139	P	1	0	4		K	S	0	1	T	0	4				Includes Debris
140	P	1	0	5		K	S	0	1	T	0	4				Includes Debris
141	P	1	0	6		K	S	0	1	T	0	4				Includes Debris
142	P	1	0	8		K	S	0	1	T	0	4				Includes Debris
143	P	1	0	9		K	S	0	1	T	0	4				Includes Debris
144	P	1	1	0		K	S	0	1	T	0	4				Includes Debris
145	P	1	1	1		K	S	0	1	T	0	4				Includes Debris
146	P	1	1	2		K	S	0	1	T	0	4				Includes Debris
147	P	1	1	3		K	S	0	1	T	0	4				Includes Debris
148	P	1	1	4		K	S	0	1	T	0	4				Includes Debris
149	P	1	1	5		K	S	0	1	T	0	4				Includes Debris
150	P	1	1	6		K	S	0	1	T	0	4				Includes Debris
151	P	1	1	8		K	S	0	1	T	0	4				Includes Debris
152	P	1	1	9		K	S	0	1	T	0	4				Includes Debris
153	P	1	2	0		K	S	0	1	T	0	4				Includes Debris
154	P	1	2	1		K	S	0	1	T	0	4				Includes Debris
155	P	1	2	2		K	S	0	1	T	0	4				Includes Debris
156	P	1	2	3		K	S	0	1	T	0	4				Includes Debris
157	P	1	2	7		K	S	0	1	T	0	4				Includes Debris
158	P	1	2	8		K	S	0	1	T	0	4				Includes Debris
159	P	1	8	5		K	S	0	1	T	0	4				Includes Debris
160	P	1	8	8		K	S	0	1	T	0	4				Includes Debris
161	P	1	8	9		K	S	0	1	T	0	4				Includes Debris
162	P	1	9	0		K	S	0	1	T	0	4				Includes Debris
163	P	1	9	1		K	S	0	1	T	0	4				Includes Debris
164	P	1	9	2		K	S	0	1	T	0	4				Includes Debris
165	P	1	9	4		K	S	0	1	T	0	4				Includes Debris
166	P	1	9	6		K	S	0	1	T	0	4				Includes Debris
167	P	1	9	7		K	S	0	1	T	0	4				Includes Debris
168	P	1	9	8		K	S	0	1	T	0	4				Includes Debris
169	P	1	9	9		K	S	0	1	T	0	4				Includes Debris
170	P	2	0	1		K	S	0	1	T	0	4				Includes Debris
171	P	2	0	2		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

172	P	2	0	3		K	S	0	1	T	0	4				Includes Debris
173	P	2	0	4		K	S	0	1	T	0	4				Includes Debris
174	P	2	0	5		K	S	0	1	T	0	4				Includes Debris
175	U	0	0	1		K	S	0	1	T	0	4				Includes Debris
176	U	0	0	2		K	S	0	1	T	0	4				Includes Debris
177	U	0	0	3		K	S	0	1	T	0	4				Includes Debris
178	U	0	0	4		K	S	0	1	T	0	4				Includes Debris
179	U	0	0	5		K	S	0	1	T	0	4				Includes Debris
180	U	0	0	6		K	S	0	1	T	0	4				Includes Debris
181	U	0	0	7		K	S	0	1	T	0	4				Includes Debris
182	U	0	0	8		K	S	0	1	T	0	4				Includes Debris
183	U	0	0	9		K	S	0	1	T	0	4				Includes Debris
184	U	0	1	0		K	S	0	1	T	0	4				Includes Debris
185	U	0	1	1		K	S	0	1	T	0	4				Includes Debris
186	U	0	1	2		K	S	0	1	T	0	4				Includes Debris
187	U	0	1	4		K	S	0	1	T	0	4				Includes Debris
188	U	0	1	5		K	S	0	1	T	0	4				Includes Debris
189	U	0	1	6		K	S	0	1	T	0	4				Includes Debris
190	U	0	1	7		K	S	0	1	T	0	4				Includes Debris
191	U	0	1	8		K	S	0	1	T	0	4				Includes Debris
192	U	0	1	9		K	S	0	1	T	0	4				Includes Debris
193	U	0	2	0		K	S	0	1	T	0	4				Includes Debris
194	U	0	2	1		K	S	0	1	T	0	4				Includes Debris
195	U	0	2	2		K	S	0	1	T	0	4				Includes Debris
196	U	0	2	3		K	S	0	1	T	0	4				Includes Debris
197	U	0	2	4		K	S	0	1	T	0	4				Includes Debris
198	U	0	2	5		K	S	0	1	T	0	4				Includes Debris
199	U	0	2	6		K	S	0	1	T	0	4				Includes Debris
200	U	0	2	7		K	S	0	1	T	0	4				Includes Debris
201	U	0	2	8		K	S	0	1	T	0	4				Includes Debris
202	U	0	2	9		K	S	0	1	T	0	4				Includes Debris
203	U	0	3	0		K	S	0	1	T	0	4				Includes Debris
204	U	0	3	1		K	S	0	1	T	0	4				Includes Debris
205	U	0	3	2		K	S	0	1	T	0	4				Includes Debris
206	U	0	3	3		K	S	0	1	T	0	4				Includes Debris
207	U	0	3	4		K	S	0	1	T	0	4				Includes Debris
208	U	0	3	5		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

209	U	0	3	6		K	S	0	1	T	0	4				Includes Debris
210	U	0	3	7		K	S	0	1	T	0	4				Includes Debris
211	U	0	3	8		K	S	0	1	T	0	4				Includes Debris
212	U	0	3	9		K	S	0	1	T	0	4				Includes Debris
213	U	0	4	1		K	S	0	1	T	0	4				Includes Debris
214	U	0	4	2		K	S	0	1	T	0	4				Includes Debris
215	U	0	4	3		K	S	0	1	T	0	4				Includes Debris
216	U	0	4	4		K	S	0	1	T	0	4				Includes Debris
217	U	0	4	5		K	S	0	1	T	0	4				Includes Debris
218	U	0	4	6		K	S	0	1	T	0	4				Includes Debris
219	U	0	4	7		K	S	0	1	T	0	4				Includes Debris
220	U	0	4	8		K	S	0	1	T	0	4				Includes Debris
221	U	0	4	9		K	S	0	1	T	0	4				Includes Debris
222	U	0	5	0		K	S	0	1	T	0	4				Includes Debris
223	U	0	5	1		K	S	0	1	T	0	4				Includes Debris
224	U	0	5	2		K	S	0	1	T	0	4				Includes Debris
225	U	0	5	3		K	S	0	1	T	0	4				Includes Debris
226	U	0	5	5		K	S	0	1	T	0	4				Includes Debris
227	U	0	5	6		K	S	0	1	T	0	4				Includes Debris
228	U	0	5	7		K	S	0	1	T	0	4				Includes Debris
229	U	0	5	8		K	S	0	1	T	0	4				Includes Debris
230	U	0	5	9		K	S	0	1	T	0	4				Includes Debris
231	U	0	6	0		K	S	0	1	T	0	4				Includes Debris
232	U	0	6	1		K	S	0	1	T	0	4				Includes Debris
233	U	0	6	2		K	S	0	1	T	0	4				Includes Debris
234	U	0	6	3		K	S	0	1	T	0	4				Includes Debris
235	U	0	6	4		K	S	0	1	T	0	4				Includes Debris
236	U	0	6	6		K	S	0	1	T	0	4				Includes Debris
237	U	0	6	7		K	S	0	1	T	0	4				Includes Debris
238	U	0	6	8		K	S	0	1	T	0	4				Includes Debris
239	U	0	6	9		K	S	0	1	T	0	4				Includes Debris
240	U	0	7	0		K	S	0	1	T	0	4				Includes Debris
241	U	0	7	1		K	S	0	1	T	0	4				Includes Debris
242	U	0	7	2		K	S	0	1	T	0	4				Includes Debris
243	U	0	7	3		K	S	0	1	T	0	4				Includes Debris
244	U	0	7	4		K	S	0	1	T	0	4				Includes Debris
245	U	0	7	5		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

246	U	0	7	6		K	S	0	1	T	0	4			Includes Debris
247	U	0	7	7		K	S	0	1	T	0	4			Includes Debris
248	U	0	7	8		K	S	0	1	T	0	4			Includes Debris
249	U	0	7	9		K	S	0	1	T	0	4			Includes Debris
250	U	0	8	0		K	S	0	1	T	0	4			Includes Debris
251	U	0	8	1		K	S	0	1	T	0	4			Includes Debris
252	U	0	8	2		K	S	0	1	T	0	4			Includes Debris
253	U	0	8	3		K	S	0	1	T	0	4			Includes Debris
254	U	0	8	4		K	S	0	1	T	0	4			Includes Debris
255	U	0	8	5		K	S	0	1	T	0	4			Includes Debris
256	U	0	8	6		K	S	0	1	T	0	4			Includes Debris
257	U	0	8	7		K	S	0	1	T	0	4			Includes Debris
258	U	0	8	8		K	S	0	1	T	0	4			Includes Debris
259	U	0	8	9		K	S	0	1	T	0	4			Includes Debris
260	U	0	9	0		K	S	0	1	T	0	4			Includes Debris
261	U	0	9	1		K	S	0	1	T	0	4			Includes Debris
262	U	0	9	2		K	S	0	1	T	0	4			Includes Debris
263	U	0	9	3		K	S	0	1	T	0	4			Includes Debris
264	U	0	9	4		K	S	0	1	T	0	4			Includes Debris
265	U	0	9	5		K	S	0	1	T	0	4			Includes Debris
266	U	0	9	6		K	S	0	1	T	0	4			Includes Debris
267	U	0	9	7		K	S	0	1	T	0	4			Includes Debris
268	U	0	9	8		K	S	0	1	T	0	4			Includes Debris
269	U	0	9	9		K	S	0	1	T	0	4			Includes Debris
270	U	1	0	1		K	S	0	1	T	0	4			Includes Debris
271	U	1	0	2		K	S	0	1	T	0	4			Includes Debris
272	U	1	0	3		K	S	0	1	T	0	4			Includes Debris
273	U	1	0	5		K	S	0	1	T	0	4			Includes Debris
274	U	1	0	6		K	S	0	1	T	0	4			Includes Debris
275	U	1	0	7		K	S	0	1	T	0	4			Includes Debris
276	U	1	0	8		K	S	0	1	T	0	4			Includes Debris
277	U	1	0	9		K	S	0	1	T	0	4			Includes Debris
278	U	1	1	0		K	S	0	1	T	0	4			Includes Debris
279	U	1	1	1		K	S	0	1	T	0	4			Includes Debris
280	U	1	1	2		K	S	0	1	T	0	4			Includes Debris
281	U	1	1	3		K	S	0	1	T	0	4			Includes Debris
282	U	1	1	4		K	S	0	1	T	0	4			Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

283	U	1	1	5		K	S	0	1	T	0	4			Includes Debris
284	U	1	1	6		K	S	0	1	T	0	4			Includes Debris
285	U	1	1	7		K	S	0	1	T	0	4			Includes Debris
286	U	1	1	8		K	S	0	1	T	0	4			Includes Debris
287	U	1	1	9		K	S	0	1	T	0	4			Includes Debris
288	U	1	2	0		K	S	0	1	T	0	4			Includes Debris
289	U	1	2	1		K	S	0	1	T	0	4			Includes Debris
290	U	1	2	2		K	S	0	1	T	0	4			Includes Debris
291	U	1	2	3		K	S	0	1	T	0	4			Includes Debris
292	U	1	2	4		K	S	0	1	T	0	4			Includes Debris
293	U	1	2	5		K	S	0	1	T	0	4			Includes Debris
294	U	1	2	6		K	S	0	1	T	0	4			Includes Debris
295	U	1	2	7		K	S	0	1	T	0	4			Includes Debris
296	U	1	2	8		K	S	0	1	T	0	4			Includes Debris
297	U	1	2	9		K	S	0	1	T	0	4			Includes Debris
298	U	1	3	0		K	S	0	1	T	0	4			Includes Debris
299	U	1	3	1		K	S	0	1	T	0	4			Includes Debris
300	U	1	3	2		K	S	0	1	T	0	4			Includes Debris
301	U	1	3	3		K	S	0	1	T	0	4			Includes Debris
302	U	1	3	4		K	S	0	1	T	0	4			Includes Debris
303	U	1	3	5		K	S	0	1	T	0	4			Includes Debris
304	U	1	3	6		K	S	0	1	T	0	4			Includes Debris
305	U	1	3	7		K	S	0	1	T	0	4			Includes Debris
306	U	1	3	8		K	S	0	1	T	0	4			Includes Debris
307	U	1	4	0		K	S	0	1	T	0	4			Includes Debris
308	U	1	4	1		K	S	0	1	T	0	4			Includes Debris
309	U	1	4	2		K	S	0	1	T	0	4			Includes Debris
310	U	1	4	3		K	S	0	1	T	0	4			Includes Debris
311	U	1	4	4		K	S	0	1	T	0	4			Includes Debris
312	U	1	4	5		K	S	0	1	T	0	4			Includes Debris
313	U	1	4	6		K	S	0	1	T	0	4			Includes Debris
314	U	1	4	7		K	S	0	1	T	0	4			Includes Debris
315	U	1	4	8		K	S	0	1	T	0	4			Includes Debris
316	U	1	4	9		K	S	0	1	T	0	4			Includes Debris
317	U	1	5	0		K	S	0	1	T	0	4			Includes Debris
318	U	1	5	1		K	S	0	1	T	0	4			Includes Debris
319	U	1	5	2		K	S	0	1	T	0	4			Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

320	U	1	5	3		K	S	0	1	T	0	4				Includes Debris
321	U	1	5	4		K	S	0	1	T	0	4				Includes Debris
322	U	1	5	5		K	S	0	1	T	0	4				Includes Debris
323	U	1	5	6		K	S	0	1	T	0	4				Includes Debris
324	U	1	5	7		K	S	0	1	T	0	4				Includes Debris
325	U	1	5	8		K	S	0	1	T	0	4				Includes Debris
326	U	1	5	9		K	S	0	1	T	0	4				Includes Debris
327	U	1	6	0		K	S	0	1	T	0	4				Includes Debris
328	U	1	6	1		K	S	0	1	T	0	4				Includes Debris
329	U	1	6	2		K	S	0	1	T	0	4				Includes Debris
330	U	1	6	3		K	S	0	1	T	0	4				Includes Debris
331	U	1	6	4		K	S	0	1	T	0	4				Includes Debris
332	U	1	6	5		K	S	0	1	T	0	4				Includes Debris
333	U	1	6	6		K	S	0	1	T	0	4				Includes Debris
334	U	1	6	7		K	S	0	1	T	0	4				Includes Debris
335	U	1	6	8		K	S	0	1	T	0	4				Includes Debris
336	U	1	6	9		K	S	0	1	T	0	4				Includes Debris
337	U	1	7	0		K	S	0	1	T	0	4				Includes Debris
338	U	1	7	1		K	S	0	1	T	0	4				Includes Debris
339	U	1	7	2		K	S	0	1	T	0	4				Includes Debris
340	U	1	7	3		K	S	0	1	T	0	4				Includes Debris
341	U	1	7	4		K	S	0	1	T	0	4				Includes Debris
342	U	1	7	6		K	S	0	1	T	0	4				Includes Debris
343	U	1	7	7		K	S	0	1	T	0	4				Includes Debris
344	U	1	7	8		K	S	0	1	T	0	4				Includes Debris
345	U	1	7	9		K	S	0	1	T	0	4				Includes Debris
346	U	1	8	0		K	S	0	1	T	0	4				Includes Debris
347	U	1	8	1		K	S	0	1	T	0	4				Includes Debris
348	U	1	8	2		K	S	0	1	T	0	4				Includes Debris
349	U	1	8	3		K	S	0	1	T	0	4				Includes Debris
350	U	1	8	4		K	S	0	1	T	0	4				Includes Debris
351	U	1	8	5		K	S	0	1	T	0	4				Includes Debris
352	U	1	8	6		K	S	0	1	T	0	4				Includes Debris
353	U	1	8	7		K	S	0	1	T	0	4				Includes Debris
354	U	1	8	8		K	S	0	1	T	0	4				Includes Debris
355	U	1	8	9		K	S	0	1	T	0	4				Includes Debris
356	U	1	9	0		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

357	U	1	9	1		K	S	0	1	T	0	4				Includes Debris
358	U	1	9	2		K	S	0	1	T	0	4				Includes Debris
359	U	1	9	3		K	S	0	1	T	0	4				Includes Debris
360	U	1	9	4		K	S	0	1	T	0	4				Includes Debris
361	U	1	9	6		K	S	0	1	T	0	4				Includes Debris
362	U	1	9	7		K	S	0	1	T	0	4				Includes Debris
363	U	2	0	0		K	S	0	1	T	0	4				Includes Debris
364	U	2	0	1		K	S	0	1	T	0	4				Includes Debris
365	U	2	0	3		K	S	0	1	T	0	4				Includes Debris
366	U	2	0	4		K	S	0	1	T	0	4				Includes Debris
367	U	2	0	5		K	S	0	1	T	0	4				Includes Debris
368	U	2	0	6		K	S	0	1	T	0	4				Includes Debris
369	U	2	0	7		K	S	0	1	T	0	4				Includes Debris
370	U	2	0	8		K	S	0	1	T	0	4				Includes Debris
371	U	2	0	9		K	S	0	1	T	0	4				Includes Debris
372	U	2	1	0		K	S	0	1	T	0	4				Includes Debris
373	U	2	1	1		K	S	0	1	T	0	4				Includes Debris
374	U	2	1	3		K	S	0	1	T	0	4				Includes Debris
375	U	2	1	4		K	S	0	1	T	0	4				Includes Debris
376	U	2	1	5		K	S	0	1	T	0	4				Includes Debris
377	U	2	1	6		K	S	0	1	T	0	4				Includes Debris
378	U	2	1	7		K	S	0	1	T	0	4				Includes Debris
379	U	2	1	8		K	S	0	1	T	0	4				Includes Debris
380	U	2	1	9		K	S	0	1	T	0	4				Includes Debris
381	U	2	2	0		K	S	0	1	T	0	4				Includes Debris
382	U	2	2	1		K	S	0	1	T	0	4				Includes Debris
383	U	2	2	2		K	S	0	1	T	0	4				Includes Debris
384	U	2	2	3		K	S	0	1	T	0	4				Includes Debris
385	U	2	2	5		K	S	0	1	T	0	4				Includes Debris
386	U	2	2	6		K	S	0	1	T	0	4				Includes Debris
387	U	2	2	7		K	S	0	1	T	0	4				Includes Debris
388	U	2	2	8		K	S	0	1	T	0	4				Includes Debris
389	U	2	3	4		K	S	0	1	T	0	4				Includes Debris
390	U	2	3	5		K	S	0	1	T	0	4				Includes Debris
391	U	2	3	6		K	S	0	1	T	0	4				Includes Debris
392	U	2	3	7		K	S	0	1	T	0	4				Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

393	U	2	3	8		K	S	0	1	T	0	4			Includes Debris
394	U	2	3	9		K	S	0	1	T	0	4			Includes Debris
395	U	2	4	0		K	S	0	1	T	0	4			Includes Debris
396	U	2	4	3		K	S	0	1	T	0	4			Includes Debris
397	U	2	4	4		K	S	0	1	T	0	4			Includes Debris
398	U	2	4	6		K	S	0	1	T	0	4			Includes Debris
399	U	2	4	7		K	S	0	1	T	0	4			Includes Debris
400	U	2	4	8		K	S	0	1	T	0	4			Includes Debris
401	U	2	4	9		K	S	0	1	T	0	4			Includes Debris
402	U	2	7	1		K	S	0	1	T	0	4			Includes Debris
403	U	2	7	8		K	S	0	1	T	0	4			Includes Debris
404	U	2	7	9		K	S	0	1	T	0	4			Includes Debris
405	U	2	8	0		K	S	0	1	T	0	4			Includes Debris
406	U	3	2	8		K	S	0	1	T	0	4			Includes Debris
407	U	3	5	3		K	S	0	1	T	0	4			Includes Debris
408	U	3	5	9		K	S	0	1	T	0	4			Includes Debris
409	U	3	6	4		K	S	0	1	T	0	4			Includes Debris
410	U	3	6	7		K	S	0	1	T	0	4			Includes Debris
411	U	3	7	2		K	S	0	1	T	0	4			Includes Debris
412	U	3	7	3		K	S	0	1	T	0	4			Includes Debris
413	U	3	8	7		K	S	0	1	T	0	4			Includes Debris
414	U	3	8	9		K	S	0	1	T	0	4			Includes Debris
415	U	3	9	4		K	S	0	1	T	0	4			Includes Debris
416	U	3	9	5		K	S	0	1	T	0	4			Includes Debris
417	U	4	0	4		K	S	0	1	T	0	4			Includes Debris
418	U	4	0	9		K	S	0	1	T	0	4			Includes Debris
419	U	4	1	0		K	S	0	1	T	0	4			Includes Debris
420	U	4	1	1		K	S	0	1	T	0	4			Includes Debris
421	W	P	C	B		K	S	0	1	T	0	4			Includes Debris
422	W	P	0	1		K	S	0	1	T	0	4			Includes Debris
423	W	P	0	2		K	S	0	1	T	0	4			Includes Debris
424	W	P	0	3		K	S	0	1	T	0	4			Includes Debris
425	W	T	0	1		K	S	0	1	T	0	4			Includes Debris
426	W	T	0	2		K	S	0	1	T	0	4			Includes Debris
427	W	S	C	2		K	S	0	1	T	0	4			Includes Debris
428	D	0	0	1	10,000	K	S	0	2	T	0	1			
429	D	0	0	2		K	S	0	2	T	0	1			

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

430	D	0	0	3		K	S	0	2	T	0	1				
431	D	0	0	4		K	S	0	2	T	0	1				
432	D	0	0	5		K	S	0	2	T	0	1				
433	D	0	0	6		K	S	0	2	T	0	1				
434	D	0	0	7		K	S	0	2	T	0	1				
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436	D	0	0	9		K	S	0	2	T	0	1				
437	D	0	1	0		K	S	0	2	T	0	1				
438	D	0	1	1		K	S	0	2	T	0	1				
439	D	0	1	8		K	S	0	2	T	0	1				
440	D	0	1	9		K	S	0	2	T	0	1				
441	D	0	2	2		K	S	0	2	T	0	1				
442	D	0	2	8		K	S	0	2	T	0	1				
443	D	0	2	9		K	S	0	2	T	0	1				
444	D	0	3	0		K	S	0	2	T	0	1				
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446	D	0	3	4		K	S	0	2	T	0	1				
447	D	0	3	5		K	S	0	2	T	0	1				
448	D	0	3	6		K	S	0	2	T	0	1				
449	D	0	3	8		K	S	0	2	T	0	1				
450	D	0	3	9		K	S	0	2	T	0	1				
451	D	0	4	0		K	S	0	2	T	0	1				
452	D	0	4	1		K	S	0	2	T	0	1				
453	D	0	4	3		K	S	0	2	T	0	1				
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456	F	0	0	3		K	S	0	2	T	0	1				
457	F	0	0	4		K	S	0	2	T	0	1				
458	F	0	0	5		K	S	0	2	T	0	1				
459	F	0	3	9		K	S	0	2	T	0	1				
460	W	T	0	1		K	S	0	2	T	0	1				
461	W	T	0	2		K	S	0	2	T	0	1				
462	W	P	0	1		K	S	0	2	T	0	1				
463	W	P	0	2		K	S	0	2	T	0	1				
464	W	S	C	2		K	S	0	2	T	0	1				
465																
466																

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

467																

XV. Map

Attach to this application a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the outline of the facility; the location of each of its existing and proposed intake and discharge structures; each of its dangerous waste treatment, storage, recycling, or disposal units; and each well where fluids are injected underground. Include all springs, rivers, and other surface water bodies in this map area, plus drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the facility property boundary. The instructions provide additional information on meeting these requirements.

Topographic map is located on the last page.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (refer to Instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, recycling, and disposal areas; and sites of future storage, treatment, recycling, or disposal areas (refer to Instructions for more detail).

XVIII. Certifications

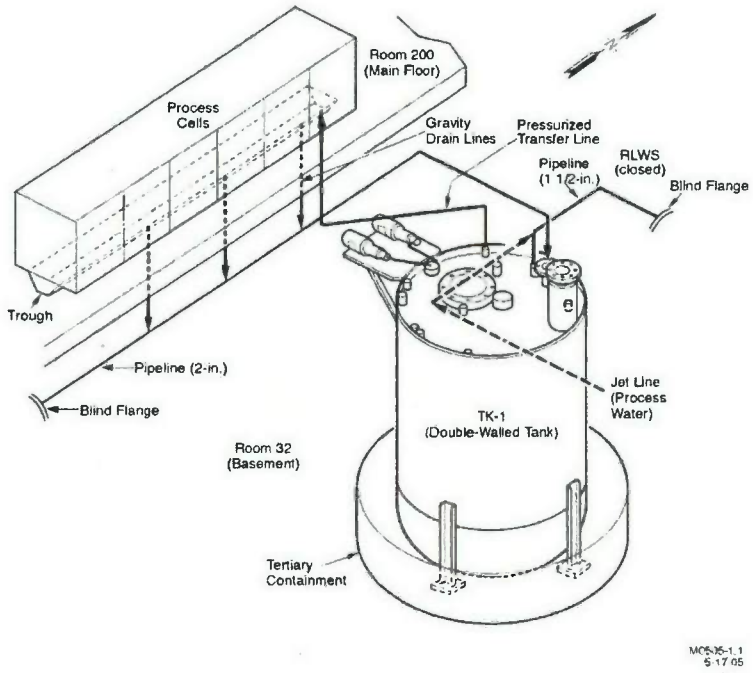
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Operator **Name and Official Title**	**Signature**	**Date Signed**
Doug S. Shoop, Acting Manager U.S. Department of Energy Richland Operations Office	Doug S. Shoop	7/9/14
Co-Operator **Name and Official Title**	**Signature**	**Date Signed**
Cameron M. Andersen, Director Environment, Health, Safety and Security Pacific Northwest National Laboratory	Cameron M. Andersen	6-20-14
Co-Operator – Address and Telephone Number* P.O. Box 999 Richland, WA 99352 (509) 372-6503		
Facility-Property Owner **Name and Official Title**	**Signature**	**Date Signed**
Doug S. Shoop, Acting Manager U.S. Department of Energy Richland Operations Office	Doug S. Shoop	7/9/14

Comments

325 Hazardous Waste Treatment Units

Shielded Analytical Laboratory Tank and Ancillary Piping



Room 528

96010398-22CN
(Photo Taken 1996)

325 Hazardous Waste Treatment Units

Room 528

96010398-20CN
(Photo Taken 1996)

Room 520

96010398-17CN
(Photo Taken 1996)

325 Hazardous Waste Treatment Units

Room 201

96010398-16CN
(Photo Taken 1996)

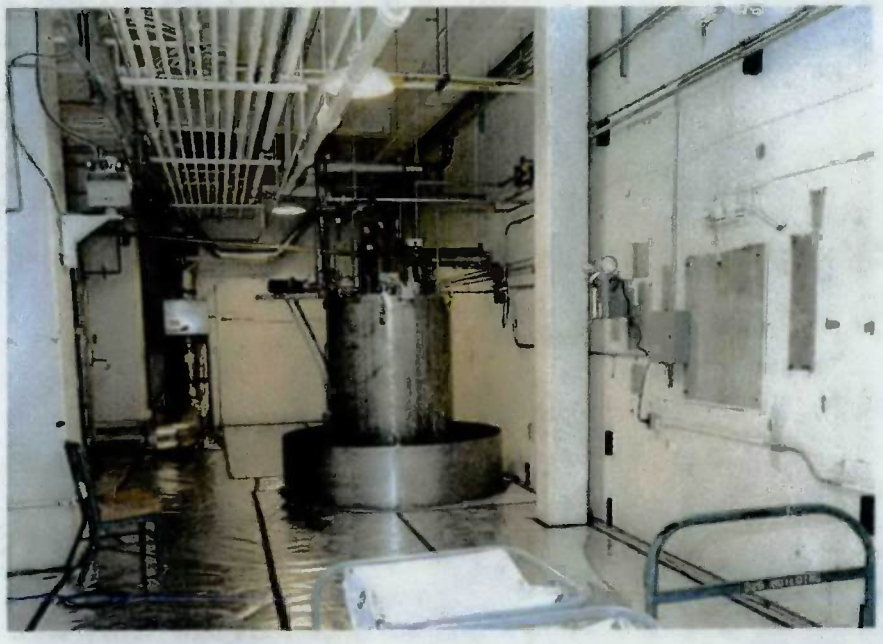
Room 201

96010398-7CN
(Photo Taken 1996)

Shielded Analytical Laboratory

Room 200

96010398-1CN
(Photo Taken 1996)



SAL Tank (Room 32)

96010398-3CN
(Photo Taken 1996)

Shielded Analytical Laboratory

Room 203

7908247-1CN
(Photo Taken 1979)

Cask Handling Area (Room 603/604A)

Photo taken 2014

Truck Lock (Room 610)

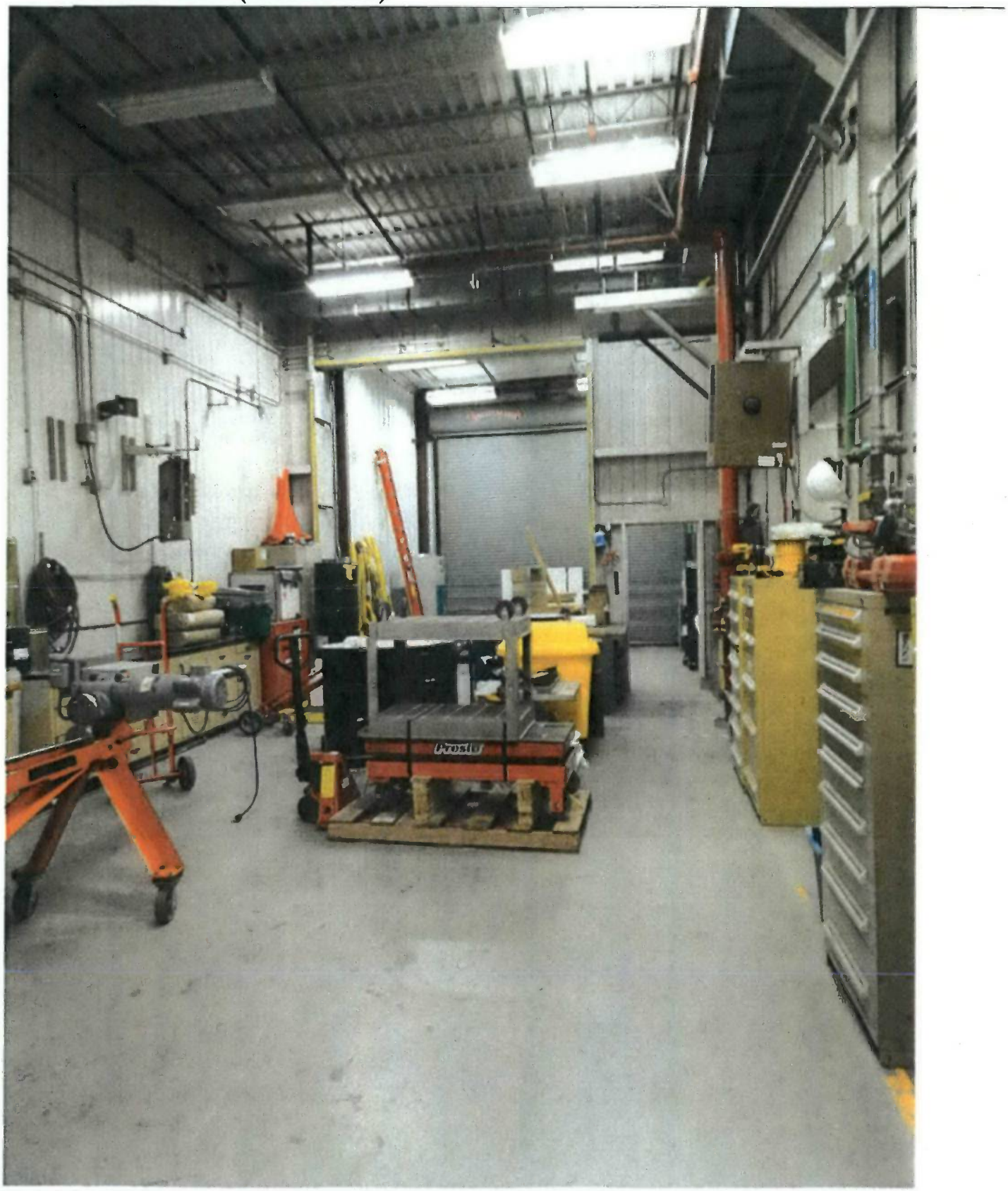


Photo taken 2014

3714 Pad

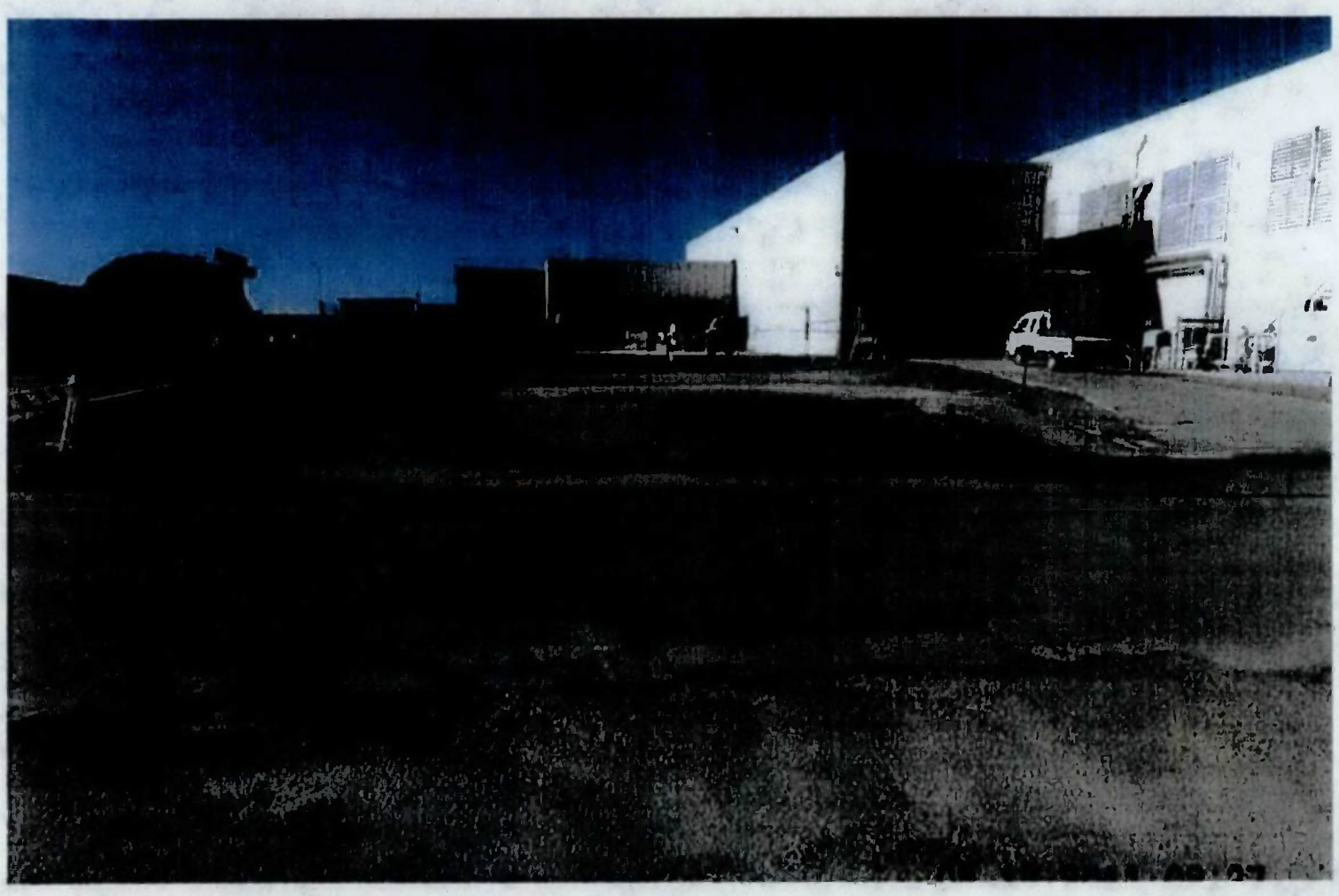
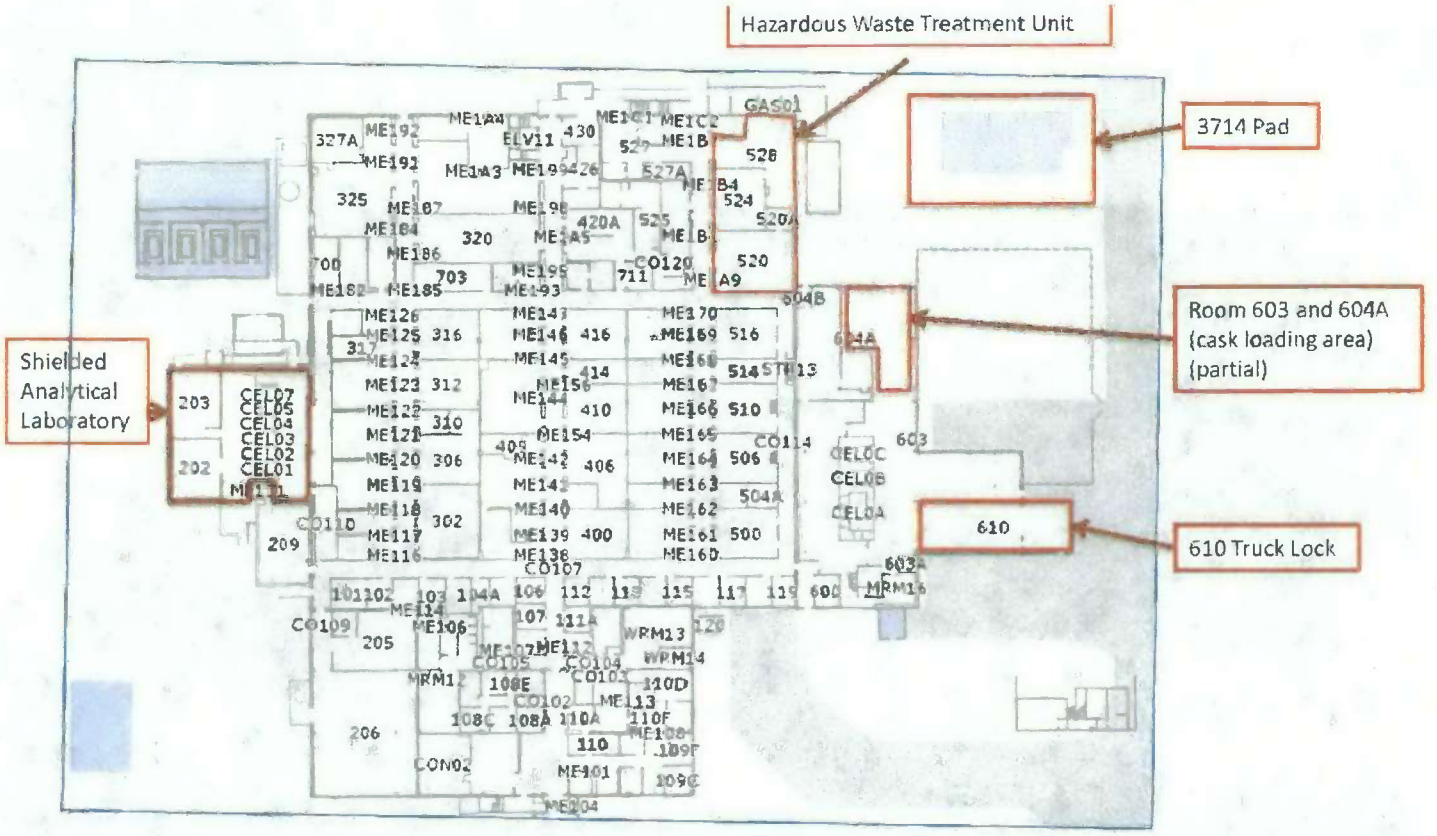


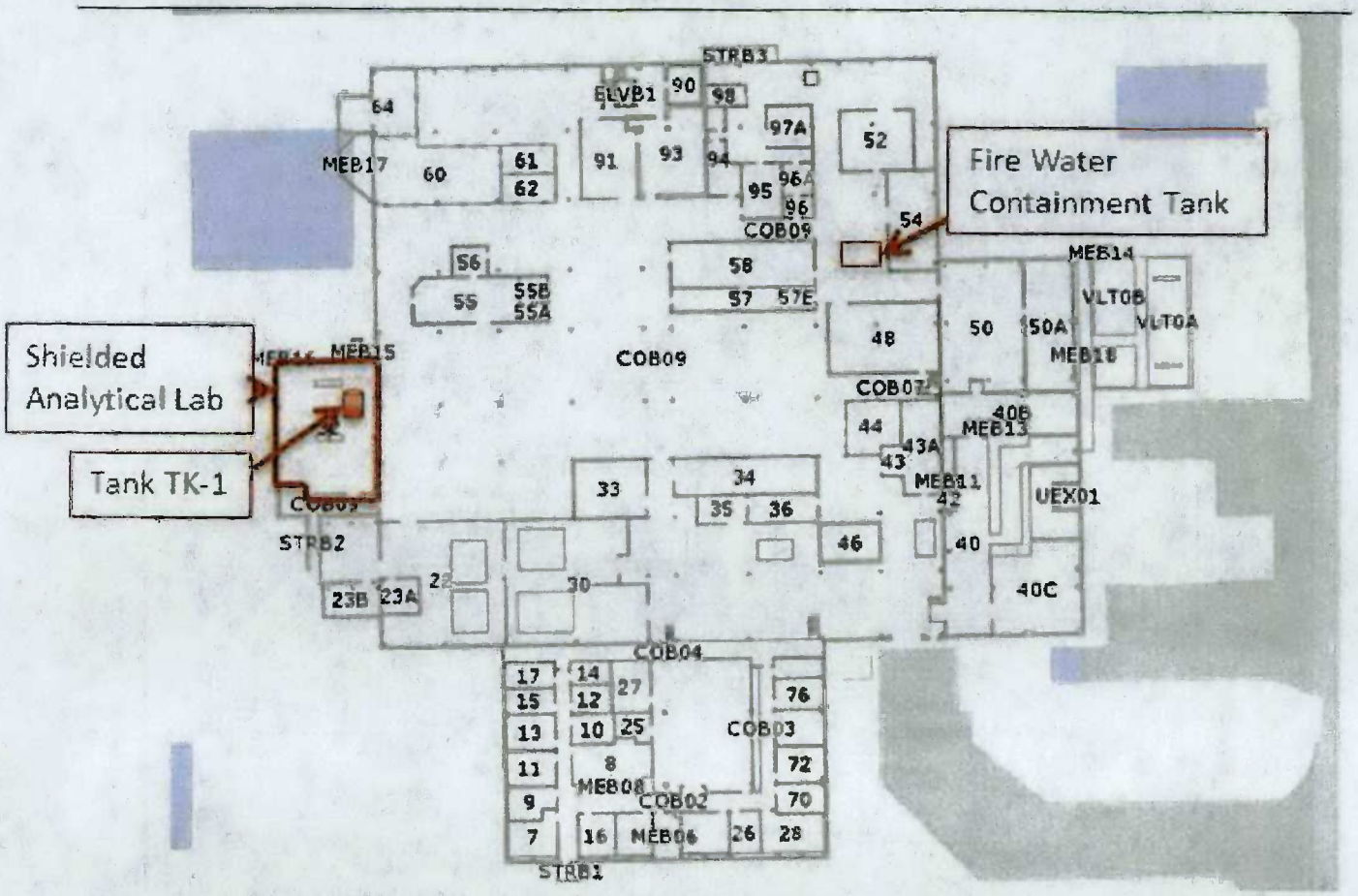
Photo taken 2011

325 Hazardous Waste Treatment Units

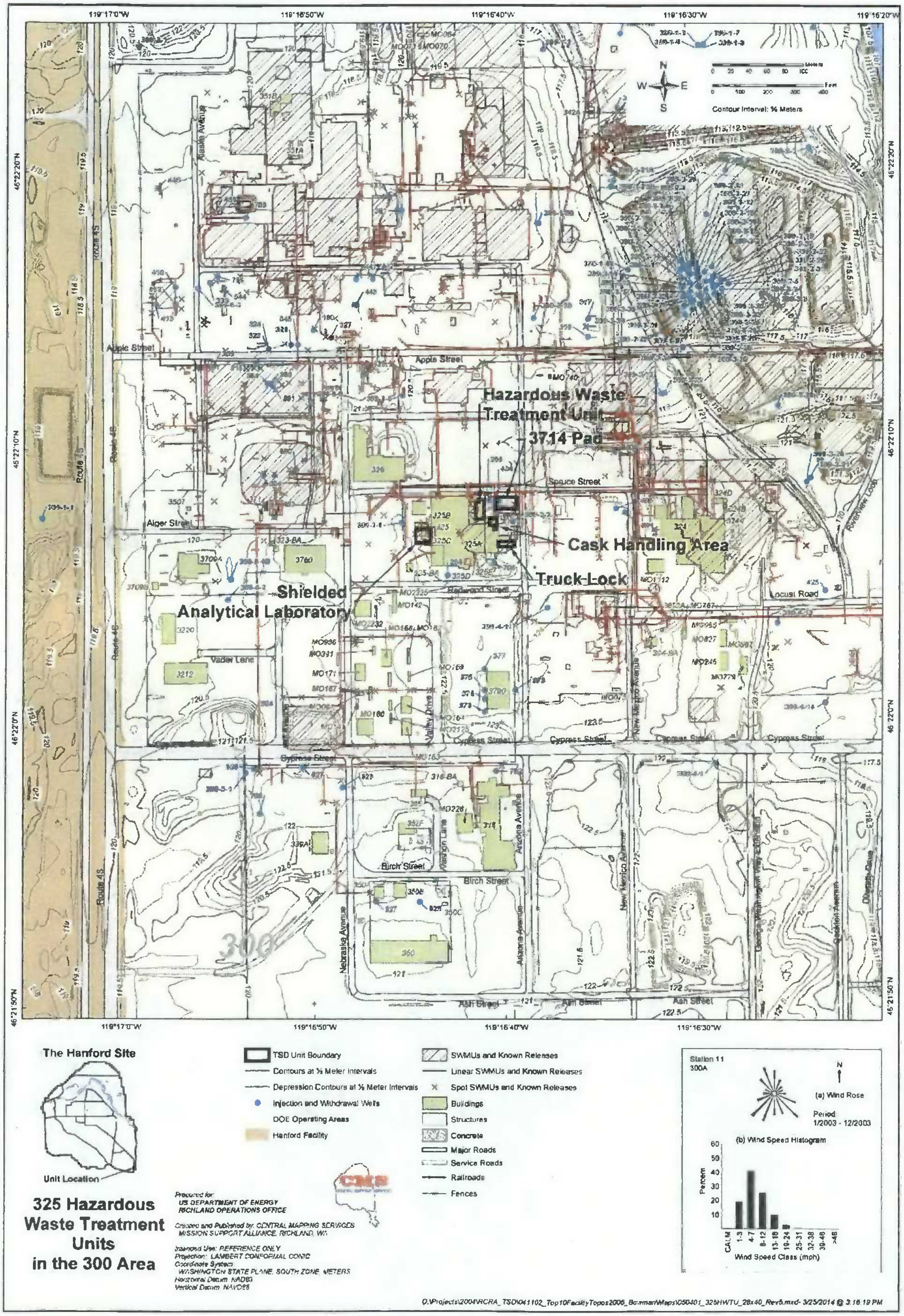


Location of the Hazardous Waste Treatment Units: 325 Building First Floor

325 Hazardous Waste Treatment Units



Location of the Hazardous Waste Treatment Units: 325 Building Basement


Hazardous Waste Treatment Unit
3714 Pad
Cask Handling Area
Truck Lock
Shielded Analytical Laboratory
Apple Street
Spruce Street
Alger Street
Cypress Street
Birch Street
Ash Street
Locust Road
Vader Lane
Route 4S
Nebraska Avenue
Arizona Avenue
New Mexico Avenue
Contour Interval: ½ Meters
The Hanford Site
Unit Location
325 Hazardous Waste Treatment Units in the 300 Area
TSD Unit Boundary
Contours at ½ Meter Intervals
Depression Contours at ½ Meter Intervals
Injection and Withdrawal Wells
DOE Operating Areas
Hanford Facility
SWMUs and Known Releases
Linear SWMUs and Known Releases
Spot SWMUs and Known Releases
Buildings
Structures
Concrete
Major Roads
Service Roads
Railroads
Fences
Prepared for: US DEPARTMENT OF ENERGY RICHLAND OPERATIONS OFFICE
Created and Published by: CENTRAL MAPPING SERVICES MISSION SUPPORT ALLIANCE, RICHLAND, WA
Intended Use: REFERENCE ONLY
Projection: LAMBERT CONFORMAL CONIC
Coordinate System: WASHINGTON STATE PLANE, SOUTH ZONE, METERS
Horizontal Datum: NAD83
Vertical Datum: NAVD88
Station 11
300A
(a) Wind Rose
Period 1/2003 - 12/2003
(b) Wind Speed Histogram
Percent
Wind Speed Class (mph)

Supplemental Information
Class 3 Modification
325 Hazardous Waste Treatment Units (HWTUs)

Purpose of This Document

Washington Administrative Code (WAC) 173-303-830(4)(c)(i) requires that a Class 3 permit modification must contain certain specific information. This document contains information required by WAC 173-303-830(4)(c)(i) that is not generally made enforceable in a permit through inclusion in one of the Addenda to the operating unit group-specific Chapter of the Hanford RCRA Permit. This information is included in order to provide a complete modification request.

Since the present Class 3 modification simply adds other existing portions of the Radiochemical Processing Laboratory facility (RPL, also known as the 325 Building) to the 325 HWTUs, many informational elements of the original application (DOE/RL-92-35, "325/3100 Hazardous Waste Treatment Unit Dangerous Waste Permit Application", June 1992) remain unchanged and are not repeated here.

Description of Change to the Permit Conditions and Supporting Documents [WAC 173-303-830(4)(c)(i)(A)]

This modification is intended to add three new dangerous waste management units to the 325 HWTUs in order to enhance the capability to manage waste in larger containers. Permitted space is needed in order to package drum-quantity wastes for shipment and disposal. For example, certain wastes managed at the 325 HWTUs must be packaged in boxes (e.g. 4'x4'x8' in size) and voids filled with grout prior to shipment for disposal. The resulting containers are heavy, exceeding floor loading limitations in the existing 325 HWTUs units and presenting materials handling challenges. The concrete added must be allowed a period of time to cure prior to sealing the boxes. Once the boxes are sealed, they are staged for shipment to the disposal facility. The units being added provide the capability to package even heavy drums into boxes and fill the void spaces in the box with grout. They then can allow the concrete to cure and store the resulting heavy boxes pending shipment.

In order to acquire this capability at the 325 HWTUs, three units are being added. Each provides a portion of the overall process described above. The units are:

- The Cask Handling Area (CHA), a portion of Rooms 603 and 604A in the RPL. These two rooms are part of the High Level Radiochemistry Facility (HLRF), the hot cell facility located on the east end of the RPL. The HLRF (historically known as the 325-A building) was added to RPL in 1960. The CHA is at the north end of the main floor of the HLRF. The CHA has a heavy-duty 30-ton crane to allow heavy drums to be safely lifted and placed in boxes already holding the first "lift" (base) of concrete. These boxes can then be transported through the loading door located in the CHA. Room 604A also has a fume hood that can be used to store and treat waste in the same manner as is currently performed in the existing portions of the 325 HWTUs.
- The Truck Lock, Room 610 in the RPL. This room is also part of the HLRF. It was constructed after the original HLRF as a weather-sheltered load-in and –out facility and is on the east side of the HLRF. The Truck Lock has easy truck access and was built with heavy-duty concrete on grade, so even heavy boxes being stored may be easily accommodated. It also offers a larger

space for easy maneuvering and handling of larger containers (e.g. boxes). PNNL expects to use the Truck Lock to allow trucks to deliver the grout needed to stabilize the boxes containing previously containerized waste, and allow that grout to cure prior to sealing the box. Some container storage may also take place.

- The 3714 Pad is the concrete foundation slab for the former 3714 Building just northeast of the RPL facility. The 3714 building was built in 1955 and was demolished in August 2011. Due to the presence of active underground utilities nearby, the foundation was not removed. The pad is approximately 50'x24'. It will be used to store waste that is being scheduled for shipment from the other 325 HWTUs units and possibly other PNNL generators. One of the significant uses of the 3714 pad will be to store the grouted and sealed boxes created in the CHA and Truck Lock pending shipment to disposal. Since the waste will be sealed in its inner containers, covered with grout and enclosed in a box, outdoor storage is safe and preferable to indoor storage. It not only moves the waste out of the path of other HLRF operations, but it is easier to load the boxes onto the transport vehicle and inspections are convenient.

The addition of the capability to grout waste containers in large (e.g. 4'x4'x8' box) containers results in a significant increase in the treatment and storage capacity of the 325 HWTUs. Storage capacity in containers is increased from 12,000 liters to 50,360 liters, and treatment in containers is increased from 1,514 liters per day to 39, 874 liters per day. These increases are directly related to the addition of the capability to place waste containers in larger containers and boxes and grouting them prior to shipment. For instance, two four-liter paint cans of waste may be placed in a 208-liter drum. The drum is then placed in a 4x4x8 box (~3622 liters) for disposal and the box void filled due to disposal facility requirements. This results in an approximately 453-fold increase in storage and treatment volume, even though the waste volume (as generated) did not change and the waste itself was not modified. PNNL does not plan to significantly increase the amount of waste it generates and subsequently manages in the 325 HWTUs.

Along with the addition of the units, several minor changes to the existing permit are proposed. The most significant changes revise the 325 HWTUs closure plan to allow for partial closure. The previous approach had a closure plan for each unit. The revised approach views all the units in terms of container storage and includes a single plan for closure of such units. The revised approach also calls out the Shielded Analytical Laboratory (SAL) hot cells and tank system as a separate closure and ties them together for purposes of determining when closure is to begin. This is necessary since the only way to introduce waste to the SAL tank is through the hot cells; all other drains have been sealed. Similarly, the only way to retrieve liquids from the tank is to draw it into the hot cells and treat/package it for disposal.

Other changes are typically to update the permit and addendum language, and to reflect current regulatory and permitting language and practice. All changes to the existing permit are noted in a redline/strikeout version being provided to Ecology in this package, along with "comments" noting the rationale for the change and the class and specific modification reference from WAC 173-303-830, Appendix I.

<u>Identification of Modification Class</u> [WAC 173-303-830(4)(c)(i)(B)]

This modification is identified as a Class 3 (major) modification, as it increases the overall waste management capacity of the 325 HWTUs by more than 25%. [WAC 173-303-830 Appendix I, F.1.a]

Certain other modifications are Class 1 (minor) modifications, some of which require Ecology's prior approval.

Explanation of Why Modification is Needed [WAC 173-303-830(4)(c)(i)(C)]

This modification is needed because the 325 HWTUs occasionally manage dangerous wastes (usually mixed wastes) requiring special handling and packaging prior to disposal. In the instant case, two one-gallon paint cans of highly radioactive mixed waste must be placed in a specially adapted 55-gallon drum with radioactive shielding, and the lid permanently attached to the drum by melting the polyethylene liner using a proprietary system. This is mandated by a site-specific variance issued by Ecology pursuant to 40 CFR 268. The polyethylene-lined drum cannot be disposed of at Hanford (as also specified in Ecology's site-specific variance) without being placed in a 4x4x8 box and then the box filled with grout (cement). The box and grouting is necessary pursuant to Hanford waste acceptance criteria regarding subsidence following disposal, which is mandated by the Hanford RCRA Permit. In order to fulfill the regulatory requirements for disposal, therefore, PNNL must have permitted space to conduct this activity and similar ones in the future.

The use of three units to perform this function is necessary since the CHA supports the activities of the entire HLRF, not just the 325 HWTUs operation. It is not possible or practicable to utilize only the CHA. The Truck Lock does not have a crane to assist personnel in lifting or moving heavy objects, so it likewise cannot be utilized by itself. Use of the 3714 Pad would not be possible to perform the initial placement of drums in boxes or filling the box voids with grout, as the grout must cure for a specified time before the box can be sealed. Weather events could interfere with the mandated curing cycle. However, use of the 3714 Pad is highly advisable with regard to storage prior to shipment, as it moves the waste away from staff work areas, makes loading of the transporter easier through easy access by heavy lifting equipment, and allows for convenient periodic inspections required by the Permit.

Other permit modifications are necessitated by recent EPA and Ecology interpretations regarding unit closures, and other changes to relevant regulations, permits, and guidance. Explanation of each individual change is contained in the redline/strikeout version of the permit conditions and addenda in this package.

Prior to 2013, Ecology allowed PNNL to utilize portions of the HLRF, including the CHA, for repackaging and staging for shipment on a case-by-case basis. This has been done several times. In 2013, Ecology informed PNNL that it would no longer allow this to be done, and if the capability was necessary, the necessary portions of the HLRF should be added to the 325 HWTUs permit. This permit modification seeks to do just that.

For information purposes, PNNL has attempted to identify numerous other means to manage this waste short of permitting the CHA, Truck Lock, and 3714 Pad. These have included use of T-Plant, the Perma-Fix Northwest facility, and acquiring a variance to dispose of the waste without grouting in a box. All of these have been determined to be unacceptable alternatives. Note that PNNL expects to need this capability into the future, so one-time alternatives to treat the waste on hand would have to be replicated for each future waste requiring such treatment. Establishing treatment capability at the 325 HWTUs for waste requiring treatment to meet LDRs and Hanford disposal requirements is consistent with the requirements set forth in Hanford Site acceptance criteria that only LDR-compliant waste is to be accepted without use of the variance process.

Applicable Information Required by WAC 173-303-805 through -808 [WAC 173-303-830(4)(c)(i)(D)]

The following updates to information provided in the 325 HWTUs permit application, Rev. 1 (June 1997) are relevant to this modification.

Section 2.1.3, "Liquid Waste Drainage Systems"

Both the Retention Process Sewer (RPS) and Radioactive Liquid Waste System (RLWS) mentioned in this section are now retired and out of service. The Radioactive Liquid Waste Tank mentioned as a replacement for the RLWS has also been procedurally closed. As noted in the procedural closure documentation for the Radioactive Liquid Waste Tank, all former RLWS connections have been blanked and/or locked. As noted in Addendum C, radioactive liquid waste entering the SAL tank is pumped back up to the SAL hot cells for subsequent treatment and packaging for disposal.

In the place of the RPS, PNNL has installed a retention tank in the basement of the RPL into which the liquid effluents discharged to facility sink drains (including those in the 325 HWTUs) are collected and tested. The collected effluent, once confirmed to meet discharge criteria, is discharged to the City of Richland sewer system pursuant to the industrial discharge permit issued to the Department of Energy, Richland Operations Office (RL).

Section 2.1.4, "Other Environmental Permits", and Section 13.0, "Other Relevant Laws"

Other environmental permits relevant to the 325 HWTUs are now reflected in Section X of the Part A form found in Addendum A.

Section 2.2, "Topographic Map"

The current topographic map is attached to Addendum A.

Section 2.5, "Release from Solid Waste Management Units"

This information is maintained pursuant to the Tri-Party Agreement. Location of SWMUs and the nature of any releases from those units are found in the WIDS database maintained by RL.

Section 10.0, "Waste Minimization"

The correct citation for waste minimization certification is now WAC 173-303-380(1)(q).

Section 12.0, "Reporting and Recordkeeping"

This information is now found in Permit Attachment 6, "Reports and Records".

Section 14.0, "Certification"

An updated certification statement appears on the following pages.

U.S. Department of Energy, Richland Operations Office Certification

The following certification statement is provided for the submittal of the Class 3 permit modification package and temporary authorization request for the 325 Hazardous Waste Treatment Units, dated May 2014.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Doug S. Shoop, Acting Manager
U.S. Department of Energy
Richland Operations Office

7/9/14
Date

Pacific Northwest National Laboratory (PNNL) Certification

The following certification statement is provided for the submittal of the Class 3 permit modification package and temporary authorization request for the 325 Hazardous Waste Treatment Units, dated May 2014.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Cameron M. Andersen

6-20-14

Cameron M. Andersen, Director
Environment, Health, Safety and Security
Pacific Northwest National Laboratory

Date